

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR2004/002473

**A. CLASSIFICATION OF SUBJECT MATTER****IPC7 H04Q 1/02**

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC7 H04L,M,N,Q G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Patents and applications for inventions since 1975

Korean Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KR 2003-0044297 A (Hyundai syscom ) 9 JUN 2003 see the whole documents	1 - 3
A	US 5,907,614 B1 ( Teltrend Inc.) 25 MAY 1999 see the whole documents	1 - 3
A	US 5,988,409 B1 ( Industrial Wire Products, Inc.) 23 NOV 1999 see the whole documents	1 - 3
A	US 6,169,987 B1 (MCI communication Corporation.) 2 JAN 2001 see the whole documents	1 - 3

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

17 DECEMBER 2004 (17.12.2004)

Date of mailing of the international search report

**17 DECEMBER 2004 (17.12.2004)**

Name and mailing address of the ISA/KR



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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

PCT/KR2004/002473

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 2003-0044297A	9 JUN 2003	NONE	
US 5,907,614 B1 20 MAY 1997	25 MAY 1999	US 5,631,956 B1	
		US 5,521,977 B1	28 MAY 1996
US 5,988,409 B1	23 NOV 1999	US 5,894,940 B1	20 APR 1999
US 6,169,987 B1	02 JAN 2001	WO 9843155 A1	1 OCT 1998
		AU 6576598 A1	20 OCT 1998
		US 6473762 B1	29 OCT 2002
		WO 03046771 A1	5 JUN 2003